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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,461	11/07/2001	Yeshik Shin	594728117US	3693

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EXAMINER

KHUONG, LEE T

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 06/21/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,461

Applicant(s)

SHIN ET AL.

Examiner

Lee Khuong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 12-18 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 19-24, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 7, 11, 25 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawing of Figure 5 is objected to as failing to comply with 37 CFR 1.84(p)(5) because it does not include the following reference character(s) mentioned in the description: "Packet **510**" on col. 7 par. 0091 line 9. Corrected drawing sheet is required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawing of Figure 5 is objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "**570**" and "**511**" have both been used to designate "Packet **510**". Corrected drawing sheet is required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawing of Figure 9A is objected to as failing to comply with 37 CFR 1.84(p)(5) because it does not include the following reference character(s) mentioned in the description: "packet **904**" and "primitive **903**" on col. 9 par.0098 line 4 and line 6. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 2, 3, 4, 5, 6, 8, 10, 19, 20, 21, 22, 23, 24, and 27 are rejected under 35 U.S.C 102(b) as being anticipated by Sonnier, (5,574,849) et al, hereinafter referred as Sonnier.

Regarding claims 1 and 19,

Sonnier teaches a method and a device for transmitting control information during transmission of packets, the method and device comprising: transmitting symbols of the packet, the symbols of the packet including in-band symbols (see col. 27, lines 30 – 38, ***command/data symbols to be transmitted out of X or Y encoders***); and when control information is to-be transmitted, stopping the transmitting of the symbols of the packet (see col. 27, lines 56 – 67 and col. 28, lines 1 – 2); transmitting an out-of-band symbol representing the control information; and after the out-of-band symbol is transmitted, continuing with the transmitting of the symbols of the packet that have not yet been transmitted (see col. 28, lines 31 – 35, ***Y encoder transmits IDLE symbols when there are no message packet transmissions***).

Regarding claims 2 and 20,

Sonnier teaches a method and a device for transmitting control information during transmission of packets wherein the out-of-band symbol is one of two out-of-band symbols that form a primitive (see col. 28, lines 31 – 35, ***Y encoder transmits IDLE symbols when there are no message packet transmissions***).

Regarding claims 3 and 21,

Sonnier teaches a method and a device for transmitting control information during transmission of packets wherein one symbol of the primitive has a negative disparity and the other symbol of the primitive has a positive disparity (see col. 27, Table 1, ***most three significant bits determine command/data packet***).

Regarding claims 4 and 22,

Sonnier teaches a method and a device for transmitting control information during transmission of packets wherein the primitive has a neutral disparity (see col. 27, Table 1, ***most three significant bits determine command/data packet***).

Regarding claims 5 and 23,

Sonnier teaches a method and a device for transmitting control information during transmission of packets wherein the transmitting of the primitive has minimal effect on running disparity (see col. 27, Table 1, ***most three significant bits determine command/data packet***).

Regarding claims 6 and 24,

Sonnier teaches a method and a device for transmitting control information during transmission of packets wherein the transmitting of the out-of-band symbol has minimal effect on running disparity (see col. 27, Table 1, ***most three significant bits determine command/data packet***).

Regarding claim 8,

Sonnier teaches a method and a device for transmitting control information during transmission of packets including receiving the symbols of the packet via one port of a switch and transmitting the symbols of the packet via another port of the switch (see col. 13, lines 19 – 34, ***redundant communication paths between any CPUs 12, router 14A', in port 4, out port 3***).

Regarding claims 10 and 27,

Sonnier teaches a method and a device for transmitting control information during transmission of packets wherein the control information controls a data store device (see col. 16, lines 39 – 53, ***command symbols communicates between various CPUs and I/O packet interfaces. Simplifying design, the processor will construct a data structure in memory***).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonnier in view of Latif, (6,400,730) et al, hereinafter referred as Latif.

Regarding claims 9 and 26,

Sonnier teaches a method and a device for transmitting control information during transmission of packets set forth in the rejection of claim 1 and claim 19 as described above.

Sonnier fails to teach a method and a device for transmitting control information during transmission of packets wherein the control information controls communications nodes of a storage area network.

However, the control information controls communications nodes of a storage area network is known in the art for routing data packets in storage network switch as evidenced by Latif.

Latif teaches the control information controls communications nodes of a storage area network (see Figure 1, col. 5, lines 50 – 67, col. 6, lines 1 – 5, **SAN**) for the purpose of routing data packets in storage network switch.

One skilled in the art would have recognized the advantage of using the control information controls communications nodes of a storage area network as taught by Latif in the system of Sonnier for the purpose of routing data packets in storage network switch.

Thus, it would have been obvious to one skilled in the pertinent art at the time the invention was made to apply Latif's teaching of the control information controls

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communications nodes of a storage area network in Sonnier's system with the motivation of routing data packets in storage network switch.

Allowable Subject Matter

Claims 7, 11, 25 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior arts do not teach an in-band is transition optimized, an out-of-band is not transition optimized, the symbols of the packet can include non-contiguous out-of-band symbols, the control information includes contiguous out-of-band symbols.

Claims 12 – 18 are allowable. The prior arts do not teach segmenting data packets and merging segmented packets into one packet using interrupt control information wherein control information is an out-of-band symbol or plurality of out-of-band symbols.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Albrecht, (5,583,872), et al, discloses a method and a system to transfer data at high speed over twisted pair cabling.


Frenzel, (5,400,323), et al, discloses a method and a system for controlling the insertion of stations into FDDI network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Khuong whose telephone number is 703-305-4899. The examiner can normally be reached on 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Lee T. Khuong
Examiner
Art Unit 2665


RICKY NGO
PRIMARY EXAMINER